

**Examiner's Statement, Amendment and Reasons for Allowance**

**Examiner's Statement**

The after-final amendments filed on 10/5/09 are acknowledged and have been entered.

The objection to the specification in the previous Office action mailed 8/11/09 is withdrawn in view of applicant's amendment to the specification filed 10/5/09.

The rejection of claim 24 under 35 USC 101 in the previous Office action mailed 8/11/09 is withdrawn in view of applicant's amendment to the specification filed 10/5/09, and the examiner's amendment below, whereby a physical computer readable medium is interpreted as not including carrier wave, which is a signal.

The rejection of claims 14-19 and 21-24 under 35 USC 112, first paragraph, set forth in the previous Office action mailed 8/11/09 is withdrawn in view of applicant's amendment and arguments filed 10/5/09.

The rejection of claims 14-19 and 21-24 under 35 USC 112, second paragraph, set forth in the previous Office action mailed 8/11/09 is withdrawn in view of applicant's amendment filed 10/5/09.

Claims 14-19 and 21-28 are allowed with the following examiner's amendment.

**Examiner's Amendment**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

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Authorization for this examiner's amendment was given in a telephone interview with Yan Leychkis on 10/13/09.

**In the claims:**

In claim 14 (based on the amendment filed 10/5/09):

in line 3, before "(a) defining", delete "(A)"; and

in the last line, before "wherein", delete "(B) the method of (A).".

In claim 18:

in line 2, after "using a", delete "tangible", insert therefor -- physical --.

In claim 19:

In line 1, before "method for," delete "computer-implemented," and insert therefor -- computer assisted --;

in line 3, before "(a) receiving", delete "(A)"; and

in the last line, before "wherein", delete "(B) the method of (A).".

In claim 24:

in line 1, before "computer-readable", delete "tangible", insert therefor -- physical --.

**Reasons for Allowance**

The following is an examiner's statement of reasons for allowance:

The prior art does not teach or suggest a method of designing and producing a polyketide synthase (PKS) gene comprising: (a) defining the structure of a desired polyketide by a first string of alphanumeric symbols, wherein each symbol in the first string represents a monomer unit of the desired polyketide; (b) comparing the first string of alphanumeric symbols to a second string of alphanumeric symbols from a database,

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wherein the database comprises at least one second string of alphanumeric symbols representing a known polyketide, and wherein each alphanumeric symbol in the second string represents a monomer unit of the known polyketide; (c) identifying a common alphanumeric symbol or continuous sequence of alphanumeric symbols in said first and second strings; (d) generating a third string, wherein the third string comprises the name of the known polyketide and the common alphanumeric symbol or continuous sequence of alphanumeric symbols identified from step (c), and wherein the third string represents the structure of a PKS gene encoding a PKS enzyme capable of producing the desired polyketide; (e) storing or displaying the third string, and (f) using the third string to produce the PKS gene; or wherein steps (b) and (c) are repeated. Nor does the prior art teach or suggest a PKS gene designed and produced by the above method.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### **Inquiries**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shubo (Joe) Zhou, whose telephone number is 571-272-0724. The examiner can normally be reached Monday-Friday from 8 A.M. to 4 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marjorie Moran, can be reached on 571-272-0720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Shubo Zhou/

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